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10/712,402	11/12/2003	Makoto Fujino	MIPFP064	6833

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EXAMINER	
PRABHAKHER, PRITHAM DAVID	
ART UNIT	PAPER NUMBER
2622	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/712,402	FUJINO, MAKOTO	
	Examiner	Art Unit	
	Pritham Prabhakher	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 11-16* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/08/2007 and 10/21/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 11-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Toyoda et al. (US Pub No.: 2002/0167592A1)

*In regard to **Claim 1,** Toyoda et al. teach of an image processing method, comprising the steps of:*

*providing image data generated by an image generating device (The camera in Figure 1 provides image data, **Figure 1 and Paragraph 0079)**, and image generation record information associated with the image data, the image generation record information (correction conditions) including at least operating information about the image generating device at the time of generation of the image data (Correction conditions (image generation record information) for the image at the time of generation including operating information about the camera are provided, **Paragraph 0080)**; and*

when the image generation record information includes subject brightness information relating to brightness of a subject at the time of generation of the image data, adjusting picture quality of the image data using a subject brightness level derived

from the subject brightness information (The image generation record information (correction conditions) includes the brightness of the subject (See Figure 8A). The picture quality is adjusted/corrected based on the brightness level derived from the subject brightness information. The image process setting (correction parameters) are generated during the capturing of an image and stored in a memory card S1522. The memory card is then inserted into a printer and the print image process is carried out based on the correction conditions, such as the brightness of the subject, stored on the memory card, ***See Figures 8A-B and Figures 15-18 and Paragraphs 0080-0093, 0155-0158 and 0242 et seq.)****.*

Regarding ***Claim 11****, Toyoda et al. teach of an image processing method according to claim 1, wherein*

the picture quality adjustment step includes a step of, when the image generation record information (correction condition) includes photometric brightness information regarding a result of measuring subject brightness at the time of generation of the image data, calculating (processing) the subject brightness using the photometric brightness information, ***See Figures 8A-B and Figures 15-18 and Paragraphs 0080-0093, 0155-0158 and 0242 et seq.)****.*

In regard to ***Claim 12****, Toyoda et al. teach of an image processing method according to claim 1, wherein the picture quality adjustment step includes a step of, when the image generation record information includes information relating to aperture value and information relating to shutter speed of the image generating device at the*

time of generation of the image data, calculating the subject brightness level using the aperture value and the shutter speed. ***Paragraph 0103*** *teaches that correction conditions are set based on the aperture and shutter speed (capturing conditions). Although not specifically mentioned or taught, it is inherent that the brightness level is calculated during image processing to fit the set conditions of the aperture value and the shutter speed because these values deal with the amount of light that has an effect on the brightness of an image and in order to recreate a suitable image, the brightness of the image needs to fit the capturing conditions.*

Regarding ***Claim 13****, Toyoda et al. teach of an image processing method according to claim 1, wherein*

the picture quality adjustment step includes a step of, when the image generation record information includes information relating to aperture value, information relating to shutter speed of the image generating device at the time of generation of the image data, and information relating to optical circuit sensitivity (ISO sensitivity), calculating the subject brightness level is using the aperture value, the shutter speed, and the sensitivity. ***Paragraph 0103*** *teaches that correction conditions are set based on the aperture and shutter speed (capturing conditions). Figure 8b shows that ISO sensitivity information is also used as a correction condition depending on the mode. Although not specifically mentioned or taught, it is inherent that the brightness level is calculated during image processing to fit the set conditions of the aperture value, the shutter speed and the ISO sensitivity because these values deal with the amount of light that has an*

effect on the brightness of an image and in order to recreate a suitable image, the brightness of the image needs to fit the capturing conditions.

In regard to ***Claim 14****, Toyoda et al. teach of an image processing device (printer 53 in Figure 7 and also Figure 2) for performing image processing using image data generated by an image generating device (The camera in Figure 1 provides image data,* ***Figure 1 and Paragraph 0079)****, and image generation record information associated with the image data, the image generation record information including at least operating information about the image generating device at the time of generation of the image data (Correction conditions (image generation record information) for the image at the time of generation including operating information about the camera are provided,* ***Paragraph 0080)****, the image processing device comprising:*

a picture quality adjuster that, when the image generation record information includes subject brightness information relating to brightness of a subject at the time of generation of the image data, adjusts picture quality of the image data using a subject brightness level derived from the subject brightness information (The image generation record information (correction conditions) includes the brightness of the subject (See Figure 8A). The picture quality is adjusted/corrected based on the brightness level derived from the subject brightness information. The image process setting (correction parameters) are generated during the capturing of an image and stored in a memory card S1522. The memory card is then inserted into a printer (picture quality adjuster) and the print image process is carried out based on the correction conditions, such as

the brightness of the subject, stored on the memory card, ***See Figures 8A-B and Figures 15-18 and Paragraphs 0080-0093, 0155-0158 and 0242 et seq.)****.*

With regard to ***Claim 15****, Toyoda et al. teach of an output device (printer 53 in Figure 7 and Figure 2) for outputting an image using image data generated by an image generating device (The camera in Figure 1 provides image data,* ***Figure 1 and Paragraph 0079)****, and image generation record information associated with the image data, the image generation record information including at least operating information about the image generating device at the time of generation of the image data (Correction conditions (image generation record information) for the image at the time of generation including operating information about the camera are provided,* ***Paragraph 0080)****, the output device comprising:*

a picture quality adjuster that, when the image generation record information includes subject brightness information relating to brightness of a subject at the time of generation of the image data, adjusts picture quality of the image data using a subject brightness level derived from the subject brightness information (The image generation record information (correction conditions) includes the brightness of the subject (See Figure 8A). The picture quality is adjusted/corrected based on the brightness level derived from the subject brightness information. The image process setting (correction parameters) are generated during the capturing of an image and stored in a memory card S1522. The memory card is then inserted into a printer (picture quality adjuster) and the print image process is carried out based on the correction conditions, such as

the brightness of the subject, stored on the memory card, ***See Figures 8A-B and Figures 15-18 and Paragraphs 0080-0093, 0155-0158 and 0242 et seq.)****, and*

an image output unit for outputting an image according to the image data after the picture quality adjustment (The printer 53 provides the means for outputting an image on paper, ***Paragraph 0251)****.*

Regarding the computer program storing ***Claim 16****, this corresponds to apparatus claim 14 and is therefore analyzed and rejected as previously discussed with respect to apparatus claim 14.*

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoda et al. as applied to claim 1 above, and further in view of Hoshuyama (US Patent No.: 7184079B2).

In regard to ***Claim 2****, Toyoda et al. teach of an image processing method according to claim 1, wherein the picture quality adjustment step includes a step of executing color balance adjustment processing (white balance adjustment processing,* ***Figure 8B and Paragraph 0250).*** *However, Toyoda et al. do not explicitly teach of executing the white balance adjustment processing of the image data using the subject*

brightness level. Hoshuyama teaches that values calculated (weighted points) for white balancing are done in conformance to the subject brightness, ***Figure 4 and Column 9, Lines 58-62 of Hoshuyama****. It would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the white balance in accordance to the subject brightness because this prevents an image from having unnatural color results,* ***Column 2, Lines 1-3 of Hoshuyama****.*

Regarding ***Claim 3****, Toyoda et al. and Hoshuyama disclose an image processing method according to claim 2, wherein the picture quality adjustment step includes a step of adjusting intensity of the color balance adjustment processing (white balance adjustment processing) to a higher level as the subject brightness level becomes lower, over at least a portion of the subject brightness level range in which the subject brightness level is low (The step in calculating the weighted value a1 for adjusting the white balance is set to a higher level when the subject brightness level is low,* ***See Figure 8 and Column 11, Lines 3-9 of Hoshuyama)****.*

In regard to ***Claim 4****, Toyoda et al. and Hoshuyama disclose an image processing method according to claim 3, wherein*

the picture quality adjustment ***(Figure 4)*** *includes:*

(i) a process of analyzing the image data to determine a magnitude of color shift indicating an extent of color skew in the image data (A magnitude of change in colors from areas with white to the other areas (color shift indicating color skew) is determined, ***Column 5, Lines 55 et seq. of Hoshuyama)****;*

(ii) a process of selecting a processing level of the color balance adjustment processing, based on the magnitude of the color shift ***(****White balance adjustment processing takes place based on the amount of color difference (color shift) between the areas of white versus the other areas on the entire image,* ***Column 5, Lines 55 et seq. Of Hoshuyama and Figure 4)****, and*

(iii) a process of executing the color balance adjustment processing according to the selected processing level ***(****White balance adjustment takes place according to the a selected processing level,* ***Column 7, Lines 3-39 of Hoshuyama)****;*

and wherein the intensity of the color balance adjustment processing is adjusted by varying a process parameter (varying equations 7 and 8 in Column 7) that affects result of at least one of the process (i) and (ii) ***(****Varying the value of m in equations 7 and 8 affects the result of the white balance adjustment signals CT1-CT3,* ***Column 7, Lines 1 et seq.)***

Regarding ***Claim 5****, Toyoda et al. and Hoshuyama disclose an image processing method according to claim 4, wherein the picture quality adjustment step includes a step of determining the magnitude of the color shift, using pixel values of a substantially achromatic area of the image data* ***(****White balance adjustment processing takes place based on the amount of color difference (color shift) between the areas of white versus the other areas on the entire image,* ***Column 5, Lines 55 et seq. Of Hoshuyama and Figure 4****. The magnitude of the color shift is done using pixel values of an achromatic area of the image data,* ***Column 5, Lines 63-67 and Column 6, Lines 1 et seq. of Hoshuyama)****.*

*In regard to **Claim 6**, Toyoda et al. and Hoshuyama disclose an image processing method according to claim 5, wherein the picture quality adjustment step includes a step of determining the magnitude of the color shift, using pixel values of an area located within a substantially achromatic area of the image data but excluding areas thereof having predetermined hue (White balance adjustment processing takes place based on the amount of color difference (color shift) between the areas of white versus the other areas on the entire image, **Column 5, Lines 55 et seq. Of Hoshuyama and Figure 4**. The magnitude of the color shift is done using pixel values of an achromatic area of the image data, **Column 5, Lines 63-67 and Column 6, Lines 1 et seq. of Hoshuyama.** Areas that are not white (predetermined hue) are excluded).*

*With regard to **Claim 7**, Toyoda et al. and Hoshuyama disclose an image processing method according to claim 4, wherein the intensity of the color balance adjustment processing (white balance adjustment processing) is adjusted by varying a process parameter (m) that represents a ratio of the processing level of the color balance adjustment process to the magnitude of the color shift (See Equations 7 and 8 in **Column 7, Lines 3 et seq. of Hoshuyama)***

*In regard to **Claim 8**, Toyoda et al. and Hoshuyama disclose an image processing method according to claim 5, wherein the intensity of the color balance adjustment processing is adjusted by varying a process parameter that defines a range of the substantially achromatic area (m in equations 7 and 8 represents an achromatic area, **Column 7, Lines 3 et seq. of Hoshuyama)**.*

*Regarding **Claim 9**, Toyoda et al. and Hoshuyama disclose an image processing method according to claim 2, wherein*

*the picture quality adjustment step includes the steps of: when the image generation record information includes supplemental light source firing information at the time of generation of the image data **(Paragraph 0087 of Toyoda et al.)**, determining whether the supplemental light source provided illumination at the time of generation of the image data, using the firing information **(Figure 8a of Toyoda et al.)**; Although Toyoda et al. determine whether or not an illumination means was provided, the reference does not explicitly teach of executing the color balance adjustment processing (white balance adjustment processing) using the subject brightness level if it is determined that illumination was not provided. Hoshuyama teaches that values calculated (weighted points) for white balancing are done to adjust to the subject brightness, **Figure 4 and Column 9, Lines 58-62 of Hoshuyama**. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the white balance in accordance to the subject brightness because this prevents an image from having unnatural color results, **Column 2, Lines 1-3 of Hoshuyama**.*

Allowable Subject Matter

Claim 10 is objected to as being dependent upon a rejected base claim 1, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pritham Prabhakher whose telephone number is 571-270-1128. The examiner can normally be reached on M-F (7:30-5:00) Alt Friday's Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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